

ABSTRACT OF THE DISCLOSURE

The present invention relates to nucleic acid molecules encoding mCLK2, mCLK3, and mCLK4 polypeptides, nucleic acid molecules encoding portions of their amino acid sequences, nucleic acid vectors harboring such nucleic acid molecules, cells containing such nucleic acid vectors, purified polypeptides encoded by such nucleic acid molecules, and antibodies to such polypeptides. Also included are assays that contain at least one CLK protein kinase related molecule. Diagnosis and treatment of an abnormal condition related to RNA splicing or cell proliferation in an organism by using a CLK protein kinase related molecule or compound are disclosed. A method of using a CLK protein kinase related molecule or compound as a contraceptive to reproduction in male organisms is also disclosed.

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